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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,666	12/19/2000	Akira Mashimo	MM4342	3491

7590 03/24/2004

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1251 Avenue of the Americas
New York, NY 10020

EXAMINER

MERID, ARADOM B

ART UNIT	PAPER NUMBER
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2631

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/740,666

Applicant(s)

MASHIMO ET AL.

Examiner

Aradom B. Merid

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 12/19/2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3, 4, 6-11, 13 and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Because the recitations

- a) “... a first timing signal ...” and “ a second timing signal ...” in the claim limitations of claims 3, 4, and 6 - 8 were not clearly described (or mentioned) in the specification,
- b) “...a third counter ...” and “... a fourth counter ...” in the claim limitations of claims 6, 7 and 9 were not clearly described (or mentioned) in the specification,
- c) “...third timing signal...” and “...forth timing signal...” in the claim limitations of claims 10 and 13 were not clearly described (or mentioned) in the specification,
- d) “ third timing signal...”, “...fourth timing signal...”, “... fifth timing signal...” and “...sixth timing signal...” in the claim limitations of claims 11 and 14 were not clearly described (or mentioned) in the specification.

Claim 5 and 12 are also rejected under 35 U.S.C. 112, first paragraph since claim 5 and 12 are dependent on the rejected base claims 4 and 10 respectively. They are inherently rejected as being dependent on rejected base claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2, 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hedstrom et al., U.S. Patent Number: 5,272,448 of Record (hereinafter Hedstrom).

As to claim 1 and 17, Hedstrom teaches a digital demodulator **10** and a method that generates digital signal which comprises a clock pulse output circuit **20** which outputs pulses on the positive and negative polarities, wherein the polarity of the signal is determined by the sign detector **14** (zero crossing detector) of the input signal (col. 3, lines 43-52 and Fig.1). Hedstrom also teaches a counter (counters) to count the clock pulses, and the counter(s) outputs counted value to the DAC (col. 3, lines 56-60 and Fig. 1).

As to claim 2, Hedstrom discloses a clock which outputs clock pulses according to the polarity of the signal, i.e., a first clock pulse is outputted when the input signal has a positive polarity as determined by the zero-crossing detector and a second pulse is outputted when the input signal has a negative polarity as determined by the zero-crossing detector (col. 6, lines 24-41 and Fig. 1). Hedstrom further discloses a first counter to count the output of the first clock pulse and a second counter to count the output of the second clock pulse (col. 6, lines 24-41 and Fig. 1).

As to claim 16, Hedstrom discloses the utilization of a low pass filter to reduce noise and smooth out quantization jitter at the output of the demodulator (col. 4, lines 51-62).

Conclusion

The following prior art references also discuss some relevance to the claimed inventions.


Hedstrom et al.	U.S. Pat. No. 5,272,448
Yokogawa et al.	U.S. Pat. No. 4,872,155
Yokogawa et al.	U.S. Pat. No. 4,982,110
Takei	U.S. Pat. No. 5,517,371
Skergan	U.S. Pat. No. 6,226,345
Tanka et al.	U.S. Pat. No. 5,142,420
Mushimo	U.S. Pat. No. 6,670,831
Allon et al.	U.S. Pat. No. 6,111,831

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aradom B. Merid whose telephone number is 703-305-8953. The examiner can normally be reached on 8:00am-5:00pm (Mon. - Fri.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghhayour can be reached on 703-306-3034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aradom B. Merid



MOHAMMAD H. GHAYOUR
PRIMARY EXAMINER